

DETECTION OF ANTIBODIES TO EXTRACTABLE NUCLEAR ANTIGENS BY ELISA FOR THE DIAGNOSIS OF CONNECTIVE TISSUE DISORDERS IN ANA POSITIVE PATIENTS

Introduction:

Autoimmune diseases occur in 3–5% of the population ⁽¹⁾ as a result of myriad of genetic and environmental factors that lead to altered immune reactivity^(2,3). The alterations in the immune system initiated by a loss of immunological tolerance to self-antigens lead to the development of autoreactive phenomena that can be detected in the peripheral blood

Objectives:

To study the different types of Extractable Nuclear Antibodies (SSA,SSB,Sm,RNP/Sm,Scl-70,JO-1) present in the study population and also find the association of different ENA subtypes in connective tissue disorders.

Methods :

This study was conducted for a period of 1 year from April 2016 to March 2017. The study population mainly consisted of 100 patients, attending Rheumatology department, Tirunelveli Medical college hospital, Tirunelveli. 50 patients had signs and symptoms related to connective tissue disorders and were ANA positive. Another 50 patients had no signs

and symptoms related to CTD and were ANA negative . The age group studied was 15-65 years .Both sexes were included

Result :

Out of 100 patients tested, 28 (56%) of ANA positive patients and 3 (6 %) among control group were found to be positive for extractable nuclear antibodies by ENA screening ELISA. Among ENA positive subjects most common age group was 30-39 years that is 38.7% were in this age group .Extractable Nuclear Antibodies were found most predominantly in females (28 out of 31) 90.3% compared to males (3 out of 31) 9.7% Among the 31 ENA positive subjects SSA was identified in 17 (54%) ,SSB in 6 (19%), Sm in 16 (51%) , RNP/Sm in 18 (58%) , Scl-70 in 4 (12 %) patients .

Conclusion :

Autoimmune connective tissue diseases are rare group of diseases with significant impact on patient's quality of life and socioeconomic aspects. Antinuclear antibody testing is the gold standard diagnostic tool in CTDs. But its role as disease activity and prognostic marker is less understood. This study has ventured to analyze the correlation of ENA profile with disease activity and prognosis. Antibodies against extractable nuclear antigens (ENAs) are useful diagnostic markers for various autoimmune connectivetissue diseases.

ELISA evaluated in this study has the advantage over the other techniques is that it enables the detection of antibodies with additional specificities. Its major advantages are its lower price and the fast and simultaneous detection of different autoantibodies in a single serum.

Key words: Connective tissue disorders, Anti Nuclear Antibodies , Extractable Nuclear Antibodies , ELISA,